

ThermoFuse® varistors

TDK releases new series of varistors for overvoltage protection and enhanced monitoring

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TDK Corporation (TSE: 6762) presents two new series of ThermoFuse® varistors, which are equipped with monitor outputs and integrated thermal protective components for overvoltage protection.

The MT25 series (B72225M*) currently covers a voltage range from 150 V_{RMS} to 385 V_{RMS}, and its maximum surge current capability is 20 kA at a pulse form of 8/20 µs, according to IEC 61643-11. With dimensions of 25 x 28 x 14 mm, the completely encapsulated protective components feature a particularly compact design. Their monitor outputs are optionally available with or without electrical isolation.

The MT30 series (B72230M*) includes types, which are designed for voltages from 150 V_{RMS} to 750 V_{RMS}. Its maximum surge current capability is 25 kA at a pulse form of 8/20 µs according to IEC 61643-11, with dimensions of 34 x 28 x 14 mm. The monitor outputs of these varistors are designed with electrical isolation.

The new ThermoFuse varistors are specially developed quadratic disk varistors, which are connected in series with a patented thermal protective component design. In the case of a persistent overvoltage and therefore heating of the varistor, the fuse is activated and separates the varistor from the circuit with a high level of reliability, preventing potential damage to the PCB or the components installed in the varistor's vicinity. What's more, disconnection from the mains protects against a thermal runaway.

Thanks to their high thermal resistance and use of flame retardant materials for the housing, the ThermoFuse MT25 and MT30 series varistors meet the requirements of flammability rating UL 94 V-0. They are listed in the UL 1449 standard 4th Edition.

These varistors' main applications include photovoltaic inverters, powerful industrial power supplies and inverters, as well as power supplies for lighting systems and telecommunications systems.

Main applications

- Photovoltaic inverters
- Powerful industrial power supplies
- Inverters
- Power supplies for lighting systems and telecommunications systems

Main features and benefits

- Wide voltage range from 150 V_{RMS} to 750 V_{RMS}
- High surge current capability of up to 25 kA (8/20 µs)
- Monitor outputs with or without electrical isolation
- Complete encapsulation
- Particularly compact design

About the TDK Corporation

The TDK Corporation, headquartered in Tokyo, Japan, is a leading global supplier of electronic solutions for a smart society. In keeping with its motto of 'Attracting Tomorrow', TDK uses its comprehensive materials expertise to help transform society from the pinnacle of technological progress. The company was founded in 1935 to market ferrites, which are key materials in the production of electronic and magnetic products. TDK's comprehensive, innovation-driven product range covers everything from passive components such as ceramic, aluminium-electrolytic and film capacitors to magnetic, radio frequency, piezo and protective components. Our product portfolio also encompasses sensors and sensor-based systems, including temperature and pressure sensors as well as magnetic and MEMS sensors. TDK also provides voltage supplies, energy-related components, magnetic heads and more. Our products are sold under the brand names TDK, EPCOS, InvenSense, Micronas, Tronics and TDK-Lambda. TDK's business is focused on demanding markets in the automotive, industrial and consumer electronics sectors, as well as ICT (Information and Communications Technology). The company has R&D and manufacturing facilities and sales offices in Asia, Europe and the Americas. In the 2020 financial year, TDK achieved a turnover of USD 12.5 billion and employed around 107,000 people worldwide.

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